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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,848	06/01/2001	Inyup Kang	000303	3695
23696	7590	08/05/2005	EXAMINER	
Qualcomm Incorporated Patents Department 5775 Morehouse Drive San Diego, CA 92121-1714			KIM, KEVIN	
			ART UNIT	PAPER NUMBER
			2638	

DATE MAILED: 08/05/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/872,848

Applicant(s)

KANG ET AL.

Examiner

Kevin Y. Kim

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-5 and 8-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☒ Claim(s) 3-5 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION*****Response to Arguments***

1. The amendment filed on April 21, 2005 has overcome the rejection of claims 1,2,6 and 7 under 35 USC 103. However, when claim 1, indicated allowable, was combined into claim 1, the recited steps are not placed in a proper order as expected by the examiner. In retrospect, a suggestion on how to combine the steps should have been provided to applicant. The claimed invention in accordance with originally filed claims 1 and 3 was understood in light of the specification, specifically Fig.8 and related descriptions. Specifically, after a first string of samples are shifted into a shift register, the clock is disabled to allow the calculation of a plurality of partial correlation results, "a first correlation result" and "a third correlation result." Then the clock is enabled to shift a second string of samples into the shift register and "a second correlation result" and "a fourth correlation result" are calculated. The correlation results are finally summed. It is believed that this was intended by applicant when the application is considered as a whole. Unless otherwise to be claimed, the rearranging of the steps, as suggested below, would remove any confusion as to the nature and scope of the claimed invention.

Proposed amendment to claim 3.

A method of searching for a synchronization sequence,  
comprising:  
shifting a first string of samples of a received signal into a shift  
register according to a clock signal;  
subsequent to the shifting a first string, disabling the clock

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signal;  
calculating a first correlation result based on at least a first  
substring of the first string of samples;  
calculating a second correlation result based on at least a second  
substring of the first string of samples;  
subsequent to the calculating of the second correlation result, enabling the clock  
signal,  
subsequent to the enabling the clock signal, shifting a second  
string of samples of the received signal into the shift register according to the  
clock signal,  
calculating a third correlation result based on at least a first  
substring of the second string of samples,  
calculating a fourth correlation result based on at least a second  
substring of the second string of samples;  
calculating a first coherent sum based on the first correlation  
result and the second correlation result, and  
calculating a second coherent sum based on the third correlation result and the fourth correlation result,  
wherein a noncoherent sum is based on the first coherent sum  
and the second coherent sum.

If agreed, dependent claims 4 and 5 should be carefully reviewed to be consistent with any  
changed language of claim 3.

***Claim Rejections - 35 USC § 112***

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the  
subject matter which the applicant regards as his invention.

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3. Claim 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In light of the specification, claim 3 is drawn to a method of searching for a sync sequence wherein, after a first string of samples are shifted into a shift register, the clock is disabled to allow the calculation of a plurality of partial correlation results, "a first correlation result" and "a third correlation result." Then the clock is enabled to shift a second string of samples into the shift register and "a second correlation result" and "a fourth correlation result" are calculated. The correlation results are finally summed. But the order of the recited steps fail to reflect this feature understood as the present invention.

For example, the step "subsequent to the disabling the clock signal, enabling the clock signal" is apparently erroneous since the clock signal can't be enabled "subsequent to," i.e., right after the disabling operation and reenabling should be performed after correlation results in connection with the first string have been computed.

***Allowable Subject Matter***

4. Claims 8-15 are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin Y. Kim whose telephone number is 571-272-3039. The examiner can normally be reached on 8AM --5PM M-F.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kenneth Venderpuye can be reached on 571-272-3078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



KEVIN KIM  
PATENT EXAMINER